

CLAIMS

- 1 1. A device for bending a laser beam comprising:
 - 2 a beam deflection device that produces said beam having a selected number of
 - 3 addressable points; and
 - 4 a soliton forming mechanism being positioned at the output of said beam
 - 5 deflection device so it receives said beam and increases said number of addressable
 - 6 points by a certain magnitude.
- 1 2. The device of claim 1, wherein said soliton mechanism comprises a non-linear media.
- 1 3. The device of claim 2, wherein said non-linear media comprises a photonic crystal.
- 1 4. The device of claim 2, wherein said certain magnitude is greater than 100.
- 1 5. The device of claim 2, wherein said soliton mechanism comprises a length of 7.5mm.
- 1 6. The device of claim 2, wherein said beam comprises a length of 5 μ m.
- 1 7. The device of claim 2, wherein said beam comprises a diffraction length of 75 μ m.
- 1 8. A method of bending a laser beam comprising:
 - 2 producing said beam having a selected number of addressable points with a beam
 - 3 deflection device; and
 - 4 positioning a soliton forming mechanism at the output of said beam deflection
 - 5 device so it receives said beam and increases said number of addressable points by a
 - 6 certain magnitude.

1 9. The method of claim 8, wherein said soliton mechanism comprises a non-linear
2 media.

1 10. The method of claim 9, wherein said non-linear media comprises a photonic crystal.

1 11. The method of claim 9, wherein said certain magnitude comprises 100.

1 12. The method of claim 9, wherein said soliton mechanism comprises a length of
2 7.5mm.

1 13. The method of claim 9, wherein said beam comprises a length of 5 μ m.

1 14. The method of claim 9, wherein said beam comprises a diffraction length of 75 μ m.